

Appl. No. 10/729,458  
Reply to Office Action of September, 2005

### REMARKS

#### Amendments to the claims

Claims 1, 7, 12, 13, 14, 18 and 21 are amended. Claims 26-30 are added.

#### Claims Rejections under 35 U.S.C. §102(e)

The Action rejects Claims 1, 2, 4, 6, 10 and 11 under 35 U.S.C. 102(e) as being anticipated by Lim et al. (US 20050093063).

Initially, Applicant does not concede that Lim et al. is prior art to this application and expressly reserves the right to file a declaration antedating the reference, as needed, in any future response.

Lim et al. disclose a method for forming a multiple gate dielectric structure. Lim et al. partially remove the gate dielectric layer 14 to form the gate dielectric portion 18 and the gate dielectric portion 20 of gate dielectric layer 14 in regions 6 and 8. (FIG. 2; ¶ [0019]). With the **remaining gate dielectric portion 20**, the roughness of the semiconductor substrate at the interface between the semiconductor substrate and a subsequently grown gate oxide can be avoided. (¶ [0003]).

Independent Claim 1 recites the step of "removing a second section of said first insulator layer exposing a bare first section of said semiconductor substrate". As set forth above, Lim et al. do not teach this feature, as the etch process shown in FIG. 2 clearly leaves gate dielectric portion 20 over semiconductor substrate 12, not "a bare first section."

For at least these reasons, Claim 1 is not anticipated by Lim and is patentable thereover.

Claims 2, 4, 6, 10 and 11 depend from Claim 1 and are, therefore, allowable for at least the reasons set forth above with reference to Claim 1.

Appl. No. 10/729,458  
Reply to Office Action of September, 2005

**Claims Rejections under 35 U.S.C. §103**

The Action rejects Claims 3, 8 and 9 under 35 U.S.C. 103(a) as being unpatentable over Lim et al. in view of Wolf et al. Claims 3, 8 and 9 depend from Claim 1 and are, therefore, allowable for at least the reason set forth above for Claim 1.

The Action rejects Claim 4 under 35 U.S.C. 103(a) as being unpatentable over Lim et al. in view of Ryoo (US 6,784,060). Claim 4 depends from Claim 1 and is, therefore, allowable for at least the reasons set forth above for Claim 1.

The Action rejects Claim 7 under 35 U.S.C. 103(a) as being unpatentable over Lim et al. in view of Shimizu et al. (US 20050158671). Claim 7 depends from Claim 1 and is, therefore, allowable for at least the reasons set forth above for Claim 1.

The Action rejects Claims 14-17, 19, 22 and 23 under 35 U.S.C. 103(a) as being unpatentable over Lim et al. in view of Ryoo.

Applicants appreciate the Examiner's acknowledgment that Lim et al. fail to specify "an ozone containing mixture procedure to partially remove photoresist." Like Claim 1, however, independent Claim 14 recites the step of "removing a second section of said first silicon oxide layer exposing a bare second section of said semiconductor substrate". As discussed above, Lim et al. fail to disclose this feature.

For at least these reasons, it is submitted that the combination of Lim and Ryoo does not teach each feature of independent Claim 14. Accordingly, it is submitted that Claim 14 is allowable over the cited reference.

Claims 16-17, 19, 22 and 23 depend from Claim 14 and are, therefore, allowable for at least the reasons set forth above with reference to Claim 14.

The Action rejects Claim 18 rejected under 35 U.S.C. 103(a) as being obvious over Lim et al. in view of Ryoo and further in view of Yates et al. (US 20020173156A1). Claim 18

Appl. No. 10/729,458  
Reply to Office Action of September, 2005

depends from Claim 14 and is, therefore, allowable for at least the reasons set forth above for Claim 14.

The Action rejects Claim 20 under 35 U.S.C. 103(a) as being obvious over Lim et al. in view of Ryoo and further in view of Shimizu et al. Claim 20 depends from Claim 14 and is, therefore, allowable for at least the reasons set forth above for Claim 14.

The Action rejects Claim 21 under 35 U.S.C. 103(a) as being obvious over Lim et al. in view of Ryoo and further in view of Wolf et al. Claim 21 depends from Claim 14 and is, therefore, allowable for at least the reasons set forth above for Claim 14.

The Action rejects Claims 24 and 25 under 35 U.S.C. 103(a) as being obvious over Lim et al. in view of Ryoo and further in view of Wolf et al. Claims 24 and 25 depend from Claim 14 and are, therefore, allowable for at least the reasons set forth above for Claim 14.

**Newly added claim**

Claims 26-30 has been added. Examination of Claim 26 is respectfully requested. Independent Claim 26 is directed to a method of forming multiple insulator layers, comprising steps of: (a) forming a first insulator layer over a substrate, (b) removing a portion of the first insulator layer with a photoresist pattern to expose a top surface of a substrate region at the removed portion of the first insulator layer, and (c) removing the photoresist pattern while forming a second insulator layer over the exposed to surface of substrate region, wherein a remaining portion of the first insulator layer is thicker than the second insulator layer.

Briefly reviewing Claim 26 with respect to Lim et al., Lim et al. clearly does not teach exposing a top surface of a substrate region at the removed portion of the first insulator as recited in the step (b) of Claim 26. For at least this reason, Claim 26 is allowable over the art of record. Claims 27-30 depend from Claim 26 and are allowable for at least the same reasons set forth above in connection with Claim 26.


Appl. No. 10/729,458  
Reply to Office Action of September, 2005

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Early notification to that effect is respectfully requested.

The Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account **04-1679**.

Respectfully submitted,

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